

CLAIMS

The embodiment of the invention in which an exclusive property or privilege is claimed is defined as follows:

- 1 1. A portable guide device for severing a portion of a workpiece comprising:
 - 2 a) a guide bar having a longitudinal dimension relatively longer than the preselected portion
 - 3 of the workpiece to be severed;
 - 4 b) a first clamp assembly secured to a first end of the workpiece;
 - 5 c) a second clamp assembly secured to an opposing second end of the workpiece;
 - 6 d) means for aligning said first and second clamp assemblies;
 - 7 e) means for securing said guide bar to said first and second clamp assemblies;
 - 8 f) means for continuously engaging a severing tool with a longitudinal side surface of said
 - 9 guide bar beyond the first and second ends of the workpiece; and
 - 10 g) means for maintaining the relative position of the workpiece and the severed portion
 - 11 upon completing the severing operation.

1 2. The device of claim 1 wherein said guide bar further includes a plurality of planar
2 surfaces that provide a rectangular cross section.

1 3. The device of claim 1 wherein said guide bar further includes a slot centered along the
2 longitudinal axis of a bottom surface of said guide bar.

1 4. The device of claim 1 wherein said guide bar further includes a plurality of slots
2 centered along the longitudinal axis of a bottom surface of said guide bar.

1 5. The device of claim 1 wherein said first and second clamp assemblies further include
2 a protection wall to prevent the workpiece from engaging nuts affixed to a clamp frame 20 and
3 clamp plate riveted to a top portion of a clamp screw.

1 6. The device of claim 1 wherein said aligning means further includes a template
2 dimensioned to position T-bolts of said first and second clamp assemblies a predetermine
3 distance from a line of cut.

1 7. The device of claim 6 wherein said predetermined distance corresponds to the
2 distance between said T-bolts and the severing tool when said guide bar is secured to said first
3 and second clamp assemblies and the severing tool engages a side surface of said guide bar.

1 8. The device of claim 6 wherein said template further includes a notch configured to
2 removably and snugly receive said T-bolts.

1 9. The device of claim 1 wherein said guide bar securing means further includes a
2 rectangular top portion of said T-bolts positioned to insert through said slot in said bottom
3 surface of said guide bar, said top portion subsequently being rotated inside said guide bar and
4 urged into forcible engagement with an inner portion of said bottom surface via an eccentric
5 tensioning lever thereby securing said guide bar to said first and second clamp assemblies.

1 10. The device of claim 1 wherein said guide bar further includes means for securing the
2 severing tool to said guide bar.

1 11. The device of claim 10 wherein said severing tool securing means further includes
2 lateral guide having a first portion removably positioned upon said guide bar, and a second portion
3 removably joined to a receptacle portion of the severing tool.

1 12. The device of claim 1 wherein said continuous engaging means further includes a
2 notch portion in a frame portion of said first and second clamp assemblies, said notch portions
3 being substantially centered in said frame portions, said notch portions being dimensioned to
4 allow the severing tool to pass through said notches without engaging said first and second clamp
5 assemblies.

1 13. The device of claim 12 wherein said continuous engaging means further includes
2 positioning said longitudinal side surface of said guide bar proximate to said notches to direct the
3 severing tool through said notches when the severing tool is urged across the workpiece while
4 continuously engaging said side surface of said guide bar.

1 14. The device of claim 1 wherein said position maintaining means further includes
2 opposing clamp screws inserted through frame portions of said first and second clamp assemblies
3 on either side of notch portions in said frame portions, and angle portions of said frame portions
4 dimensioned to engage corresponding edge portions of the workpiece when said clamp screws are
5 tightened.

1 15. The device of claim 1 wherein said guide bar securing means further includes a T-bolt
2 having a threaded end portion with opposing sides machined fiat to fit snugly in a slot of a wedge
3 and a correspondingly configured washer, said threaded end receiving a nut to secure the relative
4 position of said T-bolt in relation to said first and second clamp assemblies, said wedge, washer and
5 nut cooperating to allow said T-bolt to secure said guide bar to said clamp assemblies when said
6 wedge is moved in a predetermined direction.

1 16. A guide device for a machining tool operating upon a workpiece comprising:
2 a) a guide bar extending beyond corresponding edges of a preselected portion of the workpiece;
3 b) means for securing said guide bar to the workpiece;
4 c) means for positioning said guide bar upon the workpiece to direct the machine tool along a
5 predetermined excursion;
6 d) means for continuously engaging the machine tool with said guide bar beyond the
7 corresponding edges of the preselected portion of the workpiece; and
8 e) means for holding at least two separated portions of the workpiece during operation of the
9 machine tool.

1 17. A device for routing a machine tool upon a workpiece comprising:
2 a) a guide bar;
3 b) means for securing said guide bar to the workpiece;
4 c) means for calibrating the position of the guide bar upon the workpiece; means for enabling the
5 machine tool to separate the workpiece into at least two distinct portions; and
6 d) means for securing the relative positions of the two distinct portions.

1 18. The device of claim 17 wherein said guide bar includes means for securing the
2 machine tool to said guide bar to maintain a predetermined engagement route of the machine tool
3 upon the workpiece.

1 19. The device of claim 18 wherein said securing further includes a lateral guide having a first
2 portion removably positioned upon said guide bar, and a second portion removably joined to
3 receptacle portion of the severing tool.

1 20. The device of claim 17 wherein said guide bar securing means further includes first and
2 second clamp assemblies removably joined to preselected portions of the workpiece corresponding
3 to a predetermined engagement route of the machine tool upon the workpiece.